REMARKS

Claims 1-3 and 5-12, 20-22, 27-31, 35 and 36 currently appear in this application. The Office Action of January 18 and the Advisory Actions of May 2 and May 30, 2007, have been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Interview

Applicant's attorney wishes to thank Examiner Coleman for the courtesies extended during the personal interview of April 10, 2007. During the interview it was agreed that claim 4 would be cancelled, as it had been withdrawn.

Specification

The specification has been amended at page 36, line 10, to delete what the Examiner alleges is an embedded hyperlink.

In accordance with Examiner Coleman's request, submitted herewith is a copy of page 43 from the application as filed.

Rejections under 35 U.S.C. 112

Claims 1-3, 5-12, 20-22, 27-31 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed. The claims have been amended to recite Ar^1 and Ar^2 rather than A^1 and A^2, and to correct other inadvertent typographical errors.

Claims 2, 3, 13-20, 23-26, 29-34 and 37-41 are rejected under 35 U.S.C. 112, first paragraph, as reciting that the disorder is associated with JNK activity.

This rejection is respectfully traversed. All reference to JNK activity has been deleted from the claims.

Claims 2, 3, 29, 30 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

This rejection is respectfully traversed. The claims have been amended to recite Ar^1 and Ar^2 rather than A^1 and A^2, and to correct other inadvertent typographical errors.

Claims 2, 3, 29, 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed. The claims have been amended to recite Ar^1 and Ar^2 rather than A^1 and A^2, and to correct other inadvertent typographical errors.

Claims 1-3, 5-12, 20-22, 27-31, 35 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed. As noted above, the claims have been amended to recite "Ar^1" and "Ar^2" rather than "A^1" and "A^2."

Claim 36 is rejected under 35 U.S.C. 112, second paragraph, the Examiner alleging that the definition of L^1 in claim 36 is broader than in claim 10, from which claim 36 depends.

This rejection is respectfully traversed. Claim 9 has been amended to recite that L^1 is a triazole ring which is fused with an unsubstituted or substituted aryl or heteroaryl.

Claim 10 depends from claim 9, and claim 10 does not limit the definitions of L^1 or L^2. Therefore, claim 10 provides antecedent basis for this limitation in claim 36. Support for this amendment can be found in the specification as filed at page 5, lines 21-28, wherein "heteroaryl" is defined as a monocyclic heteroaromatic or a bicyclic or a tricyclic fused-ring heteraromatic group. Particular examples of heteroaromatic groups include optionally substituted… 1,2,3-triazaolylm 1,2,4-triazolyl… Support specifically for a triazole ring which is fused with an unsubstituted or ssubstituted heteroaryl can be found in the specification as filed at page 12, lines 3-8.

Art Rejections

Claims 2 1-3, 20, 27, 29 and 31 are rejected under 35 U.S.C. 102(b) as anticipated by Jacobs et al., US 6,399,603; Chandrakumar et al., US 5,843,906; Grigoryan et al., *Armyanskii Khimicheskii Zhurnal*; and Kaldrikyan, *Khimiko-Farmatsevtricheskii Zhurnal*.

This rejection is respectfully traversed. The claims have been amended to recite Ar^1 and Ar^2 rather than A^1 and A^2.

Claim 2 has been amended to recite that Ar^1 is not quinazoline that is substituted by 3,4-dichlorophenyl amino.

Claim 9 has been amended to recite "hydrogen, substituted or unsubstituted alkyl..."

Claim 9 has also been amended to recite $R^{3'}$ rather than R^3 in the definition of L^1 and L^2.

Claim 11 has been amended to delete -piperazin-1-yl-.

Double Patenting

Claims 1-3, 5-12, 20-22, 27-31, 35 and 36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of copending application Serial No. 10/381,200.

This rejection is respectfully traversed. The present application was filed prior to the filing date of Serial No. 10/381,200. Submitted herewith is a copy of a printout from PAIR showing that this application is under appeal, awaiting BPAI docketing. Therefore, the cited application has not been allowed. Since the present application is senior to the cited application, it is respectfully submitted that the present application should be allowed.

Claims 1-3, 5-12, 20-22, 27-31, 35 and 36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of copending application Serial No. 10/381,665.

This rejection is respectfully traversed. The present application was filed prior to the filing date of Serial No. 10/381,665. Submitted herewith is a copy of a printout from PAIR showing that a response to a non-final Office action has been entered and forwarded to the Examiner. Therefore, the cited application has not been allowed. Since the present application is senior to the cited application, it is respectfully submitted that the present application should be allowed.

Election/Restriction

Claim 4 has now been cancelled.

New Matter

The claims have been amended to delete what the Examiner states is new matter, namely, "L_1 is a triazole fused with a substituted or unsubstituted heteroaryl."

Additionally, typographical errors in claims 3, 9 and 36 have been corrected to read $NR^{3'}C(O)R^3$.

As the present amendment places the claims into condition for allowance, entry of this amendment is respectfully requested.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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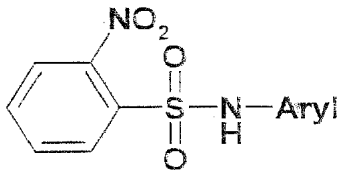
For L^2 = -NR-(CH_2)n-Aryl wherein n = 0,1,2, a preferred method is the reductive amination of 4-piperidone with amines of type Aryl-(CH_2)n-NR-H.

A further preferred method in the case where n = 0 is a "Mitsunobu type" coupling between an activated aniline of type XII with mono-N-protected 4-piperidol as described in *Tetrahedron Lett.* **1995**, *36*, 6373-6374.

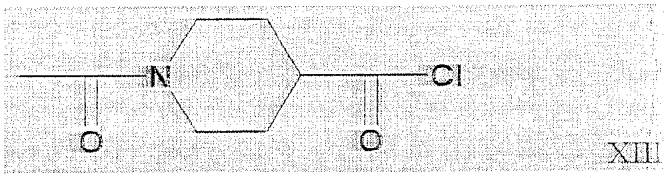


XII

Deprotection of the sulfamino group is then carried out using thiophenol in the presence of potassium carbonate.

For L^2 = -NR^3'C(O)R^3, -NR^3'C(O)NR^3'R^3, NR^3'SO_2-R^3, a preferred method of synthesis of compounds of formula IX is the reaction of commercially available N-BOC-4-aminopiperidine with respectively acyl chlorides, isocyanates and sulfonyl chloride under classical conditions very well known by one skilled in the art.

When L^2 = -CO-Aryl, compounds of formula IX are readily prepared by contacting well chosen aromatic or heteroaromatic rings with intermediate of type XIII



XIII

in the presence of a Lewis acid such as aluminum trichloride or titanium tetrachloride in a polar aprotic solvent such as dichloromethane. Intermediate XIII can be easily obtained by first acetylation of piperid-4-yl carboxylic acid and their formation of the acyl chloride by treatment with thionyl chloride.

The sulfonamides of formula I are readily prepared by contacting the sulfonyl chloride V with an amine of formula IX in the presence of a suitable base to scavenge the acid generated during the reaction. Suitable bases include, by way of examples, triethylamine, diisopropylethylamine, N-methylmorpholine and the like. The reaction is pref-

10/381,665	Pharmaceutically active sulfonamide derivatives bearing both lipophilic and ionisable moieties as inhibitors of protein junkinases	04-11-2007::08:41:37

Bibliographic Data

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Filing or 371 (c) Date:	10-10-2003	Status:	Response to Non-Final Office Action Entered and Forwarded to Examiner
Application Type:	Utility	Status Date:	02-21-2007
Examiner Name:	COLEMAN, BRENDA LIBBY	Location:	ELECTRONIC
Group Art Unit:	1624	Location Date:	-
Confirmation Number:	7646	Earliest Publication No:	US 2004-0077854 A1
Attorney Docket Number:	234672US0PCT	Earliest Publication Date:	04-22-2004
Class / Subclass:	514/002	Patent Number:	-
First Named Inventor:	Serge Halazy , Vetraz-Monthoux, (FR)	Issue Date of Patent:	-

Title of Invention:	Pharmaceutically active sulfonamide derivatives bearing both lipophilic and ionisable moieties as inhibitors of protein junkinases

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10/381,200 — Pharmaceutically active hydrophilic sulfonamide derivatives as inhibitors of protein junkinases

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Bibliographic Data

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Filing or 371 (c) Date:	09-10-2003	Status:	Appeal Awaiting BPAI Docketing
Application Type:	Utility	Status Date:	02-26-2007
Examiner Name:	CHANG, CELIA C	Location:	ELECTRONIC
Group Art Unit:	1625	Location Date:	-
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Attorney Docket Number:	234679USOPCT	Earliest Publication Date:	04-22-2004
Class / Subclass:	546/212	Patent Number:	-
First Named Inventor:	Serge Halazy , Vetraz-Monthoux, (FR)	Issue Date of Patent:	-

Title of Invention: Pharmaceutically active hydrophilic sulfonamide derivatives as inhibitors of protein junkinases

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